

# PENNSYLVANIA

## Science and Engineering Profile

	Penn.	U.S.	Rank		Penn.	U.S.	Rank
Doctoral scientists, 1993	20,012	430,332	4	Total R&D performance, 1993 (millions)	\$8,278	\$161,427	6
Doctoral engineers, 1993	3,886	81,293	6	Industry R&D, 1993 (millions)	\$6,711	\$117,622	6
S&E doctorates awarded, 1995	1,358	26,482	6	Academic R&D, 1994 (millions)	\$1,085	\$20,573	6
of which, in engineering	30%	23%		of which, in life sciences	55%	55%	
in life sciences	20%	24%		in engineering	20%	16%	
in social sciences	16%	15%		in math & computer sciences	7%	4%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	1,852	36,143	5	expenditures, 1993 (millions)	\$9,672	\$163,994	3
S&E graduate students, 1994				Number of SBIR awards, 1990-94	580	18,023	10
in doctorate-granting institutions	20,096	438,694	7	Patents issued to state residents, 1995	2,645	55,717	7
Population, 1995 (000s)	12,072	262,755	5	Gross state product, 1992 (billions)	\$267.0	\$5,994.1	6
Civilian labor force, 1995 (000s)	5,838	132,281	6	of which, agriculture	1%	2%	
Personal income per capita, 1995	\$23,279	\$22,788	19	manufacturing, mining, construction	24%	23%	
Federal spending				transportation, communication, utilities	9%	9%	
Total expenditures, 1995 (millions)	\$64,281	\$1,326,294	5	wholesale and retail trade	15%	16%	
R&D obligations, 1994 (millions)	\$1,981	\$65,654	11	finance, insurance, real estate	19%	18%	
				services	21%	20%	
				government	10%	12%	

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

### Federal Obligations for Research and Development in Pennsylvania by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
<b>Total, all agencies</b>	1,980,531	332,027	26,201	721,534	712,513	182,499	5,757	11
<b>Department of Agriculture</b>	40,272	29,696	0	0	10,566	10	0	8
<b>Department of Commerce</b>	4,583	0	600	2,601	486	847	49	20
<b>Department of Defense</b>	867,248	206,939	25,601	443,832	141,717	49,159	0	11
<b>Department of Energy</b>	347,614	66,763	0	240,074	21,322	19,455	0	6
<b>Dept. of Health &amp; Human Services</b>	526,645	12	0	5,544	419,509	101,093	487	5
<b>Department of the Interior</b>	35,801	27,037	0	6,650	2,084	30	0	4
<b>Department of Transportation</b>	13,025	1,580	0	3,467	3,968	262	3,748	11
<b>Environmental Protection Agency</b>	2,671	0	0	265	1,885	0	521	20
<b>Nat'l Aeronautics &amp; Space Admin.</b>	36,292	0	0	17,049	19,170	73	0	18
<b>National Science Foundation</b>	106,380	0	0	2,052	91,806	11,570	952	5
<b>State rank</b>	11	12	17	13	4	5	10	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.